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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,231	03/12/2004	Nan-Hsiung Yeh	STL11732	7557

7590  
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Boston, MA 02210

11/13/2007

EXAMINER
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CHAUDRY, MUJTABA M

ART UNIT	PAPER NUMBER
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2112

MAIL DATE	DELIVERY MODE
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11/13/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/799,231

**Applicant(s)**

YEH ET AL.

**Examiner**

Mujtaba K. Chaudry

**Art Unit**

2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,12-14 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,12-14 and 16-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 September 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. <u>11/8/2007</u> |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Applicants' response was received September 4, 2007.

- Claims 1, 3-9, 12-14 and 16-20 are pending.
- The objection to the IDS was not addressed. Applicants agreed to submit foreign references in response to this action. See interview summary.
- Drawing objections are withdrawn in light of amendments.
- Double Patenting rejection is maintained. Applicants agreed to file terminal disclaimer in response to this action. See interview summary.
- Rejections under 35 USC 112 are withdrawn in light of amendments.
- Proposed amendments to independent claims were reviewed by Examiner and an agreement was reached that they would be allowed once entered. See interview summary attached.

Application is pending.

### ***Response to Amendment***

Applicant's arguments/amendments with respect to claims 1, 3-9, 12-14 and 16-20 have been received. All arguments have been fully considered but are not persuasive. Examiner would like to point out that the double patenting rejection is maintained, even after the proposed amendments are entered. See interview summary. An agreement was reached to 1.) file a terminal disclaimer, 2.) file amendment to the claims as discussed and 3.) file foreign references in the IDS.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

**Claims 1, 3-9, 12-14 and 16-20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10799232.** Although the conflicting claims are not identical, they are not patentably distinct from each other. For example, claim 1, as in the proposed amendment, of the present application teaches:

1. (Currently Amended) A method, comprising:

receiving an interleaved turbo product code (TPC) code word at a sequence detector;

performing a soft decision algorithm to the interleaved TPC code word at the sequence detector;

transmitting the interleaved TPC code word to a TPC decoder, the transmitting including de-interleaving the TPC code word;

decoding the de-interleaved TPC code word at the TPC decoder into a plurality of code blocks;

performing a cyclic redundancy check (CRC) on each of the plurality of code blocks of the TPC code word;

assigning an artificially high probability confidence measure to bits of any of the plurality of code blocks which pass the CRC; and

iteratively decoding the TPC code word between the soft decision algorithm of the sequence detector and the TPC decoder using the artificially high probability confidence measure assigned to bits of code blocks which pass the CRC, the TPC code word re-interleaved when

transmitted to the sequence detector.

Copending application 10799232 basically teaches the same subject matter in claims 1 and 6. For example, claims 1 and 6 teach:

1. A method comprising: iteratively decoding a turbo product code (TPC) code word; and terminating the iterative decoding when the TPC code word satisfies a cyclic redundancy check (CRC).

6. The method of claim 4, wherein iteratively decoding the TPC code word using the SOVA and the TPC decoder further comprises: generating a probability indicative parameter, using the SOVA, for each of a plurality of sequences of bits from the TPC code word; de-interleaving the TPC code word to generate a de-interleaved TPC code word; decoding the de-interleaved TPC code word, using the TPC decoder, as a function of the probability indicative parameter from the SOVA to generate a decoded TPC code word; and re-interleaving the decoded TPC code word for use by the SOVA in updating the probability indicative parameter for each of the plurality of sequences of bits.

Essentially one is just an embodiment of the other, wherein both basically teach to iteratively decode a TPC code word based on CRC.


This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

*Conclusion*

Any inquiries concerning this communication should be directed to the examiner, Mujtaba Chaudry who may be reached at 571-272-3817. The examiner may normally be reached Mon – Thur 6:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques can be reached on 571-272-6962.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Mujtaba Chaudry  
Art Unit 2112  
November 9, 2007